

## **EXHIBIT D**

**UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF MISSISSIPPI  
NORTHERN DIVISION**

MISSISSIPPI STATE CONFERENCE OF THE  
NATIONAL ASSOCIATION FOR THE  
ADVANCEMENT OF COLORED PEOPLE; DR.  
ANDREA WESLEY; DR. JOSEPH WESLEY;  
ROBERT EVANS; GARY FREDERICKS; PAMELA  
HAMNER; BARBARA FINN; OTHO BARNES;  
SHIRLINDA ROBERTSON; SANDRA SMITH;  
DEBORAH HULITT; RODESTA TUMBLIN; DR.  
KIA JONES; ANGELA GRAYSON; MARCELEAN  
ARRINGTON; VICTORIA ROBERTSON,

*Plaintiffs,*

vs.

STATE BOARD OF ELECTION  
COMMISSIONERS; TATE REEVES, *in his official  
capacity as Governor of Mississippi*; LYNN FITCH, *in  
her official capacity as Attorney General of  
Mississippi*; MICHAEL WATSON, *in his official  
capacity as Secretary of State of Mississippi*,

*Defendants,*

AND

MISSISSIPPI REPUBLICAN EXECUTIVE  
COMMITTEE,

*Intervenor-Defendant.*

**Case No. 3:22-cv-734-DJP-HSL-LHS-  
FKB**

**SUPPLEMENTAL EXPERT REPORT OF PETER A. MORRISON, Ph.D.**

December 11, 2023

I am an applied demographer and President of Peter A. Morrison & Associates. I am retired from The RAND Corporation, where I was Senior Demographer and the founding director of RAND's Population Research Center. I have provided testimony in litigation pertaining to the Voting Rights Act and districting plans and have constructed and/or evaluated numerous proposed local redistricting plans. I have made invited presentations on demographic aspects of redistricting to members and/or staff of the U. S. House of Representatives Subcommittee on the Census; the County Counsels' Association of California; League of California Cities; National League of Cities; and at professional meetings of academic demographers (Population Association of America and the Southern Demographic Association).

I have served on the U.S. Census Bureau Advisory Committee on Population Statistics, 1989-1995; and as an invited participant on the Bureau's Working Group on 2010 Race and Ethnicity. I have been elected as President of the Southern Demographic Association and to the Board of Directors of the Population Association of America, which are the two leading associations of professional demographers; and have taught students at the RAND Graduate School. I am being compensated at a rate of \$350/hour for my work in reviewing the materials and preparing this report. I will be compensated at a rate of \$500/hour for any testimony by deposition or at trial.

Attached **Appendix A** lists all cases in which I have testified by declaration, deposition, or at trial in the past four years. Attached **Appendix B** summarizes my academic background, including all publications in the last ten years.

## I. SUMMARY OF CONCLUSIONS AND OPINIONS

1. I have been asked to opine on the level of political participation of Black eligible voters in Mississippi relative to that of the state's White eligible voters. "Political participation" here refers to the percentage of eligible voters who were registered to vote and who turned out to vote in a specific election or elections. I have accessed relevant data published by the US Census Bureau and report here what those data show.
2. To form my opinion, I have accessed and reviewed academic research on political participation by Mississippi voters. I also have assembled and analyzed data from U.S. Census Bureau's Current Population Survey (CPS), which publishes biennial data of high scientific quality. These CPS data enable me to compare the self-reported political participation of Black and White Mississippi voters in elections spanning a 42-year period. This CPS time-series of data affords a uniquely informative perspective on the central question I address: *Has the political participation of Black eligible voters changed over time relative to that of White nonHispanic eligible voters in Mississippi?* The CPS data afford me a four-decade historical perspective based upon published data from the US Census Bureau, the nation's recognized source of high-quality data.
3. Over a 42-year period, a distinct break occurred in the historical pattern of political participation by Mississippi voters. From 1980 through 2002, the political participation of Blacks trailed that of Whites, virtually without exception. From 2004 onward, that pattern reversed, such that Black political participation has *exceeded* that of Whites in most years. This break is authentic, irrespective of any apparent overreporting of registration or turnout on the CPS.
4. Based upon the entirety of these data and other research, it is my opinion that the level of Black political participation in terms of voter registration and turnout has exceeded that of Whites in most

years since 2004. This has been the case in every year since 2012 except one year when it was virtually equal.

## II. DETAILED FINDINGS: MISSISSIPPI VOTER REGISTRATION AND TURNOUT

The U.S. Census Bureau's Current Population Survey (CPS) publishes biennial data of high scientific quality with which to compare the political participation of Black and White Mississippi voters. Like many published Census Bureau data products, the CPS is a well-documented sample survey, with known statistical and measurement limitations.<sup>1</sup> Federal agencies rely upon these high-quality data for a broad spectrum of policymaking and resource allocation decisions. For my purposes, the CPS affords me a consistent time-series of self-reported political participation over the 25-year period shown in Table 1:

**Table 1. Political Participation by Race, Mississippi, 1998-2022**

Voter Registration (Citizens 18+)				Voter Turnout (Citizens 18+)			
Year	% White (NH)	% Black (AP)	Black minus White	Year	% White (NH)	% Black (AP)	Black minus White
1998	75.8%	71.3%	-4.5%	1998	41.1%	40.4%	-0.7%
2000	73.1%	73.6%	0.5%	2000	62.4%	58.4%	-4.0%
2002	72.1%	69.4%	-2.7%	2002	44.6%	41.0%	-3.6%
2004	73.9%	76.1%	2.3%	2004	60.2%	66.6%	6.4%
2006	71.0%	72.2%	1.2%	2006	39.9%	50.5%	10.6%
2008	75.0%	81.9%	6.9%	2008	68.4%	73.1%	4.7%
2010	74.2%	73.6%	-0.6%	2010	47.7%	48.1%	0.4%
2012	82.4%	90.8%	8.4%	2012	71.8%	82.7%	10.9%
2014	72.8%	83.2%	10.4%	2014	40.3%	46.6%	6.3%
2016	78.8%	81.3%	2.5%	2016	67.7%	69.2%	1.5%
2018	71.8%	77.9%	6.1%	2018	51.7%	59.8%	8.1%
2020	79.2%	83.4%	4.2%	2020	69.8%	72.9%	3.1%
2022	74.3%	72.2%	-2.1%	2022	47.6%	47.0%	-0.6%

Source: U.S. Census Bureau, Current Population Survey (annual data). Reporting is consistent from 2006 onward.  
 Accessed at: Website: <https://www.census.gov/data/tables/time-series/demo/voting-and-registration/p20-585.html>

My specific focus is whether the political participation of Black eligible voters has changed relative to that of White nonHispanic eligible voters in Mississippi. *Political participation* means the rate at which eligible voters (citizens 18 and older) were registered to vote and turned out to vote after 2002. The CPS time-series data in Table 1 and Figure 1 afford a uniquely informative perspective. The data show a conspicuous pattern of change over the most recent 19-year period (2004 through 2022) compared with the preceding five-year period (1998 through 2002). The shaded cells highlight those election years in

<sup>1</sup> First, each individual percentage in Table 1 is a sample-based measure, accompanied by a margin of error (MOE). Second, studies have documented specific instances where respondents' self-reports appear to have exaggerated actual measured rates of voter registration and/or turnout.

which self-reported registration or turnout was likelier *lower* for Blacks than for Whites.<sup>2</sup> For voter registration, there were four such years (1998, 2002, 2010, and 2022); for voter turnout, there were four such years (1998, 2000, 2002, and 2022). For voter turnout, the overall pattern suggests that Blacks have turned out at rates typically above those of Whites since 2004.

What does this 25-year historical time-series reveal about the comparative political participation of Mississippi's Black and White voters since 2002? First, one must recognize the statistical and measurement limitations that accompany these CPS measures. Each individual percentage in Table 1 is a sample-based measure, with a statistical margin of error (MOE).<sup>3</sup> In general, the smaller the "Black minus White" percentage difference, the less meaningful the difference is statistically, i.e., the greater the likelihood it appears by chance.

Statistically marginal differences (merely "likelier than not") appearing over many successive years can substantiate an authentic *pattern* over time.<sup>4</sup> The multiple individual differences shown in the "Black minus White" columns of Table 1 may be statistically insignificant (as when a coin tossed comes up heads four successive times). However, those yearly differences may disclose a statistically significant historic change across several decades. In short, discerning meaningful patterns is an alternative approach for accommodating specific instances where respondents' self-reports might be shown to have exaggerated measured rates of voter registration and/or turn out.<sup>5</sup>

Mindful of these qualifications, I offer the following observations about the historical record from 1998 through 2022 documented in Table 1, based upon data that are strictly consistent: (1) Black voting-age citizens report having *registered to vote* at a higher rate than their White non-Hispanic counterparts in 8 of the 10 most recent biennial elections (2004 through 2022); and (2) Black registered voters report having *turned out to vote* at higher rates than their White non-Hispanic counterparts in 9 of those 10 most recent elections.

The data in Table 1 strongly suggest an apparent change since 2004 in Black political participation. First, Black eligible voters have registered to vote and turned out to vote at higher rates than White eligible voters have. Second, this pattern differs markedly from the pre-2004 pattern. I do not disregard the possibility of overreporting of registration or turnout by Black voters on the CPS. However, I do question attributing this historical break to a presumed *differential* overreporting on the part of Black voters relative to Whites.

To expand my 25-year historical perspective, I next included all the preceding years for which CPS data are available (1980 through 1996). Table 2 shows this entire time series, offering a 43-year historical

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<sup>2</sup> I simply distinguish negative (shaded) values from positive (unshaded) values, irrespective of *how likely* that difference is statistically significant. My focus at this point is discerning overall patterns of positive or negative differences that are statistically "likelier than not" authentic differences (as distinct from purely random).

<sup>3</sup> "Margin of error" (MOE) is used in research to determine the precision of a specific result or a pattern of results in a scientific study. Expressed as +/- percentage points, a MOE tells us the degree to which a sample-based result may differ from the underlying true result, based upon 100% of the population. A smaller margin of error suggests the survey's results are more precise.

<sup>4</sup> As a simple example: 10 flips of a coin will often produce up to 7 heads simply by chance. However, 9 heads in 10 flips of a coin would offer proof with reasonable scientific certainty that the coin is biased.

<sup>5</sup> Like many published Census Bureau data products, the CPS is a well-documented sample survey, with well-understood statistical and measurement limitations. First, each individual percentage in Table 1 is a sample-based measure, accompanied by a margin of error (MOE). Second, studies have documented specific instances where respondents' self-reports appear to have exaggerated actual measured rates of voter registration and/or turn out.

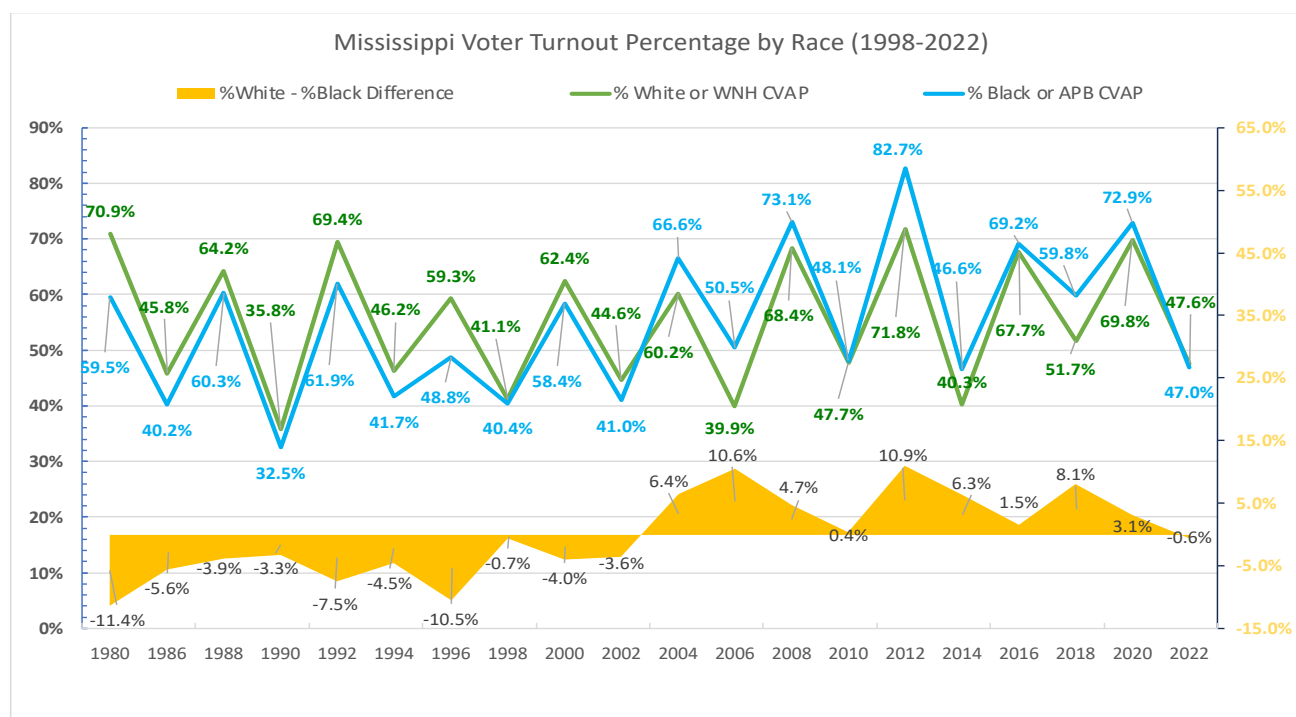
perspective extending beyond what is shown in Table 1. One should note that from 1980 through 1996, the referent population was “persons ages 18+” rather than “citizens ages 18+”. This definitional refinement has virtually no bearing on the appearance or magnitude of a racial difference between Black and White voters in Mississippi.

**Table 2. Political Participation by Race, Mississippi Since 1980**

<b>Voter Registration (Persons 18+)</b>				<b>Voter Turnout (Persons 18+)</b>			
<b>Year</b>	<b>% White (NH)</b>	<b>% Black (AP)</b>	<b>Black minus White</b>	<b>Year</b>	<b>% White (NH)</b>	<b>% Black (AP)</b>	<b>Black minus White</b>
1980	85.2%	72.2%	-13.0%	1980	70.9%	59.5%	-11.4%
1986	77.3%	75.9%	-1.4%	1986	45.8%	40.2%	-5.6%
1988	80.5%	74.2%	-6.3%	1988	64.2%	60.3%	-3.9%
1990	70.8%	71.4%	0.6%	1990	35.8%	32.5%	-3.3%
1992	80.2%	78.5%	-1.7%	1992	69.4%	61.9%	-7.5%
1994	74.6%	46.2%	-28.4%	1994	69.9%	41.7%	-28.2%
1996	75.0%	59.3%	-15.7%	1996	67.4%	48.8%	-18.6%
<b>(Citizens 18+)</b>				<b>(Citizens 18+)</b>			
1998	75.8%	71.3%	-4.5%	1998	41.1%	40.4%	-0.7%
2000	73.1%	73.6%	0.5%	2000	62.4%	58.4%	-4.0%
2002	72.1%	69.4%	-2.7%	2002	44.6%	41.0%	-3.6%
2004	73.9%	76.1%	2.3%	2004	60.2%	66.6%	6.4%
2006	71.0%	72.2%	1.2%	2006	39.9%	50.5%	10.6%
2008	75.0%	81.9%	6.9%	2008	68.4%	73.1%	4.7%
2010	74.2%	73.6%	-0.6%	2010	47.7%	48.1%	0.4%
2012	82.4%	90.8%	8.4%	2012	71.8%	82.7%	10.9%
2014	72.8%	83.2%	10.4%	2014	40.3%	46.6%	6.3%
2016	78.8%	81.3%	2.5%	2016	67.7%	69.2%	1.5%
2018	71.8%	77.9%	6.1%	2018	51.7%	59.8%	8.1%
2020	79.2%	83.4%	4.2%	2020	69.8%	72.9%	3.1%
2022	74.3%	72.2%	-2.1%	2022	47.6%	47.0%	-0.6%

Source: U.S. Census Bureau, Current Population Survey (annual data). Reporting is consistent from 2006 onward. Accessed at: Website: <https://www.census.gov/data/tables/time-series/demo/voting-and-registration/p20-585.html>

The overall historical time series in Table 2 and Figure 1 present a remarkable pattern of change over this 43-year historical period for which CPS data are available:

**Figure 1. Historical Change in Voter Turnout by Race, Mississippi Since 1980**

Source: Table 2 above.

Figure 1 displays a remarkably consistent difference between self-reported registration and turnout by Blacks and Whites from 1980 through 2002 (highlighted by the negative orange values). The opposite pattern emerged thereafter: mostly *positive* orange values, highlighting successive years when Black turnout exceeded that of Whites beginning in 2004.

Two interpretations are possible here. Either a genuine break in the historical pattern of Mississippi Black voters' political participation manifested itself in these data starting around 2004; or alternatively, the apparent break arose through a behavioral change—but only among Black eligible voters. Under this latter fanciful interpretation, Blacks (but not Whites) began overreporting that they were registered to vote and (especially) that they had turned out to vote.

As of this writing, I am unaware of any study offering me the historical depth and continuity of the Census Bureau's 43-year CPS survey, which might challenge my conclusion that a genuine break did occur.

### III. BASIS FOR CONCLUSIONS AND OPINIONS

1. The data and research I have relied upon present two alternative possibilities. First, a genuine break may have occurred, as shown in the Current Population Survey's historical record of Mississippi Black voters' political participation since around 2004.<sup>6</sup> Alternatively, the apparent break may be only the byproduct of Black respondents having overreported registering and/or turning out to vote, as various studies suggest.<sup>7</sup> Note that these two possibilities are not mutually exclusive.

<sup>6</sup> See preceding Tables 1 and 2 and Figure 1.

<sup>7</sup> See, for example, Kanazawa, Satoshi, "Who Lies on Surveys, and What Can We Do About It?" *Journal of Social, Political and Economic Studies* 30 (Fall 2005): 361-370; and a series of articles by Abramson and Claggett (1984, 1986, 1989, 1991)



2. A recent comprehensive evaluation based upon the American National Election Studies (ANES)<sup>8</sup> puts these competing interpretations to a test. Its “Summary of Findings” on page 13 casts doubt on the second alternative (overreported registration and/or turnout) [*emphasis added below*]:

“From these analyses, we conclude that the benefits of turnout validation are quite limited *and that factors other than respondent lying are a substantial cause of turnout overestimation*. We base these conclusions on four key findings. Three of these findings pertain to the quality of government records:

First, official government records of registration and turnout behavior contain errors that make it difficult to accomplish accurate turnout validation.

Second, the character and frequency of such errors varied substantially across states. These differences occurred, in part, because states kept and updated registration and turnout records in very different ways.

Third, state-level differences in government records, including differences in types of errors, caused procedures that were apparently successful in matching survey respondents to government records in one state to be very unsuccessful in other states. This finding suggests that one-size-does-not-fit-all when it comes to the best way to match registration and turnout records to respondents across the states.

Fourth, for survey respondents whose government records can be located, there are extraordinarily high rates of agreement between their self-reports and what their government records indicate. Indeed, people who participated in the 2008 ANES Panel Study, and whose self-reports could be matched to government records, genuinely turned out to vote at a higher rate than the general vote-eligible population. *This finding implies that lying contributed less to turnout over-estimation than is commonly thought*. This evidence suggests that surveys yield higher levels of apparent turnout than official vote tallies because people who choose to anticipate in surveys about elections are also more likely to participate in elections themselves.”

3. Support for the latter alternative would call for a long-term detailed study comparable to the ACS, in which each Black respondent’s *reported* turnout was matched with that same respondent’s *actual* turnout at various points in the past. As of this writing, I know of no study with anywhere near the historical depth and continuity of the Census Bureau’s 43-year CPS survey which might challenge my interpretation that the apparent break is genuine.<sup>9</sup>

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in *Journal of Politics* using voter validation data from the National Election Studies (NES), suggesting that Blacks overreport voting at higher rates than do Whites.

<sup>8</sup> M. K. Berent, J. A. Krosnick, and A. Lupia, *The Quality of Government Records and Over-estimation of Registration and Turnout in Surveys: Lessons from the 2008 ANES Panel Study’s Registration and Turnout Validation Exercise*. August 2011. Working Paper no. NES012554. Ann Arbor, MI and Palo Alto, CA: American National Election Studies. Access at: <http://www.electionstudies.org/resources/papers/nes012554.pdf>

<sup>9</sup> Studies purporting to show that Black respondents overreport registering and/or turning out to vote have limitations; most are highly specific and therefore cannot be generalized. The years analyzed by Abramson and Claggett are those for which voter validation was conducted (extending as far back as 1964); validation studies were not carried out after each election. The study by Kanazawa (2005) pools results only for years in which the ANES carried out validation; it relies upon estimated logistic regression models to estimate both registration and turnout.



4. The CPS self-reported data indicate that since 2004, Black eligible voters having turned out to vote at rates that generally *exceed* their White counterparts. Prior to 2004, this was rarely so.
5. Based upon the entirety of what I have reviewed, it is my opinion that a genuine break did occur in the historical pattern of Mississippi Black voters' political participation. In reaching this conclusion, I do not discount the possibility of ongoing overreporting of registration or turnout on the CPS.<sup>10</sup> The break itself, though, cannot be attributed just to the speculative claim of *differential* overreporting Blacks. As Berent et al. observe: "*The apparent success of turnout validation exercises in producing aggregate turnout rates that are closer to reported official turnout rates appears to occur not simply because the exercises weed out liars, but because the unrecognized 'downwards bias' due to errors in government records is stronger than the unrecognized 'upwards bias' in the actual rate of turnout amongst survey participants.*" (p. 15).
6. It is therefore my opinion that Black voter registration and turnout has exceeded that of Whites in most years since 2004, and this represents a significant increase in parity of political participation between Blacks and Whites occurring during the past 43 years in Mississippi. I hold this opinion with reasonable scientific certainty, based upon the Current Population Survey.<sup>11</sup> I reserve the right to amend or supplement my report based on additional facts, materials or testimony that might become available.

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<sup>10</sup> Any method that effectively and accurately matches respondents living in one state to available government records will not necessarily be as accurate in respondents living in another state. As Berent, Krosnick, and Lupia note (at p. 65): "Both the ANES 2008 Panel Study and the CPS data for November 2008 indicated that there are real demographic differences among people living in different states, and these demographic differences may impact the effectiveness of various matching methods."

<sup>11</sup> See Appendix C for tests of statistical significance.

Pursuant to 28 U.S.C. 1976, I declare under penalty or perjury that foregoing is true and correct according to the best of my knowledge, information and beliefs.

A handwritten signature in black ink, appearing to read "Peter A. Morrison", written over a horizontal line.

Peter A. Morrison

December 11, 2023

## Appendix A

### Cases Testified in Since 2018 by Declaration, Deposition, or at Trial

#### Peter A. Morrison, Ph. D.

1. EVENWEL v. PERRY, U.S. DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS. Declaration on behalf of Plaintiffs seeking to enjoin Texas from conducting further state Senate elections under Plan S172 and asking the court to require the Texas Legislature to reapportion state senatorial voting districts in conformity with the Fourteenth Amendment.
2. EVENWEL et al. v. ABBOTT et al., UNITED STATES SUPREME COURT. “Brief of Demographers Peter A. Morrison, et al. as *Amici Curiae* in Support of Appellants,” in Evenwel et al. v. Abbott et al., U.S. Supreme Court.
3. DR. PANKAJ JAIN, Plaintiff v. COPPELL INDEPENDENT SCHOOL DISTRICT, et al., U.S. District Court, Northern District of Texas, Dallas Division. Declaration on behalf of Defendant.
4. Glatt v. City of Pasco, et al., U.S. District Court, Eastern District of Washington. Declaration on behalf of Defendant.
5. Feldman et al. v. Arizona Secretary of State’s Office et al., U.S. District Court, Arizona District. Declaration on behalf of Defendant.
6. Timothy Dadey et al. v. City of Costa Mesa, Case No. 30-2014-00757962-CU-CR-CJC and Timothy Dadey et al. v. City of Costa Mesa, Case No. 30-2014-00758104, pending in California Superior Court, Orange County. Deposition testimony.
7. Anne Harding et al. v. County of Dallas, Texas et al. U.S. District Court, Northern District of Texas, Dallas Division. C.A. No. 3: 15-CV-00131-D. Deposition and trial testimony on behalf of Plaintiffs.
8. Pico Neighborhood, et al. v. City of Santa Monica, et al. Superior Court of the State of California for the County of Los Angeles, No. BC616804. Deposition and trial testimony on behalf of Defendant.
9. NAACP et al. v. East Ramapo School District. United States District Court for the Southern District of New York. Expert report on behalf of Defendant; testimony at trial.
10. Joseph Thomas et al. v. Phil Bryant et al., Civil Action No. 3: 18cv 441-CWR-FKB in U. S. District Court for Southern District of Mississippi, Northern Division. Deposition and trial testimony on behalf of Defendants. Case appealed and subsequently dismissed.
11. S&R Development Estates, LLC v. Town of Greenburgh et al. in United States District Court, Southern District of New York. Declaration on behalf of Defendant. Case settled.
12. Holloway, et al. v. City of Virginia Beach, et al. Expert report on behalf of Defendant; deposition testimony.
13. Johnson et al v. Ardoin, Middle District of Louisiana, U. S. District Court. Expert report on behalf of Defendant Louisiana Department of Justice.
14. Vaughan v. Lewisville Independent School District et al., United States District Court, Eastern District of Texas, Sherman Division. Expert report on behalf of Defendant; deposition testimony.
15. Suresh Kumar v. Frisco Independent School District et al., United States District Court, Eastern District of Texas. Expert report on behalf of Defendant. Civil Action # 4:19-cv-00284.
16. Benisek v. Lamone, U.S. District Court, Maryland District. Case # 13-cv-3233. Expert Report.
17. Robert Ware v. City of Long Beach, California Superior Court, Los Angeles County. Case # 20STCV44216. Expert Report; deposition testimony.
18. NAACP v. East Ramapo Central School District, U.S. District Court, Southern District of New York, Case # 17-cv-08943-CS. Testified at trial.
19. Christian Ministerial Alliance, et al. v. Asa Hutchinson, et al. U.S. District Court, Eastern District of Arkansas, Central Division. Case # 4:19-cv-00402-JM. Declaration; Expert Report.
20. Thomas et al. v. Bryant et al. (Mississippi). Expert Report; testimony at trial.
21. Bohren v. Grocery Outlet. U.S. District Court, Northern District of California. Case # 4:20-cv-07085-KAW. Declarations.
22. Atkins et al. v. Sarasota County, FL. U.S. District Court, Case # 8:19-cv-03084-WFJ-CPT. Declaration.
23. Dixon v. Lewisville Independent School District et al. Declaration on behalf of Defendant supporting Motion to Strike.

(Updated: October 9, 2023)

## **Appendix B**

### **Academic Background and Publications**

#### **Peter A. Morrison, Ph. D.**

**EMAIL:** [PETERMORRISON@ME.COM](mailto:PETERMORRISON@ME.COM) **VOICE:** (310) 266-9580

#### **EDUCATION**

B.A., Sociology, 1962, Dartmouth College  
Ph.D., Sociology, 1967, Brown University

#### **PROFESSIONAL EXPERIENCE**

2009-present — President, Peter A. Morrison & Associates, Inc., Nantucket, MA  
1969-2009 — Senior Staff Demographer and Resident Consultant, The RAND Corporation, Santa Monica, California  
1979-1990 — Founding Director, Population Research Center, RAND  
1967-1969 — Assistant Professor, Department of Sociology, and Research Associate, Population Studies Center, University of Pennsylvania, Philadelphia

#### **AREAS OF EXPERTISE**

Dr. Morrison's principal expertise centers on applications of demographic analysis to redistricting; tracking demographic trends; and envisioning consequences of demographic change for public policy and business.

Domestic applications include demographic analysis for electoral redistricting; store site selection; human resource analysis; evaluating employment discrimination and disparate impact claims, minority representation within jury pools, and school desegregation remedies; forecasting school enrollments; and using census and administrative data to monitor local community demographic contexts.

International applications include business concerns with corporate strategic planning, globally emerging middle-class consumer markets, and demographic precursors of expanding consumer markets; comparing and evaluating individual markets; and identifying potential business opportunities spurred by forthcoming demographic change.

Dr. Morrison conducts studies for the private sector and offers executive briefings on these topics through his consulting firm, founded in 1984. Clients have included American Express, American Stores, Corning, Inc., Ford Motor Co., Marriott International, NBC, New Directions for News, Times Mirror, University of California, and CIBC Securities (Canada).

Formerly a faculty member at the University of Pennsylvania, Dr. Morrison has taught periodically at UCLA, the RAND Graduate School, and the Helsinki School of Economics. He also lectures before academic and business audiences and has given invited testimony before subcommittees of the U.S. Senate and House of Representatives.

He has made invited presentations to the National Science Board, the Conference Board, the National League of Cities, the National Conference of State Legislatures, the University of California Management Institute, the American Bar Association, American Society of Newspaper Editors, newsroom seminars for the Casey Journalism Center, County Counsels Association of California, American College of Surgeons, National Association of Homebuilders, Missouri Legislative Forum, World Future Society, and Volunteers of America.

He has served as advisor to the Committee for Economic Development, the Congressional Research Service, and committees of the National Academy of Sciences, U.S. Census Bureau, Department of Agriculture, National Institutes of Health, California Energy Commission, California Governor's Council on Growth Management, Center for California Studies, and United Way.

#### **PROFESSIONAL ORGANIZATIONS/HONORS**

Advisory Board, Penn State University's online MA Program in Applied Demography  
Invited participant, U.S. Census Bureau Working Group on 2010 Race and Ethnicity  
Member, L.A. Unified School District Enrollment Analysis Technical Advisory Committee  
Visiting Lecturer, Helsinki School of Economics and Business Administration, summer 2001  
U.S. Census Bureau Advisory Committee on Population Statistics, 1989-1995 (Chair, 1990).  
Population Association of America: Board of Directors, 1978-1980; Public Affairs Committee, 1979-1986; Chair, Nominations Committee, 1981-1982; annual Program Organizing Committee, 1995, 1998; Local Arrangements

Committee, 2000; Committee on Applied Demography, 1995-1999, Chair, 1998; Development Committee, 2006-2012.

Southern Demographic Association: Board of Directors, 1999-present; Vice President, 2001; President, 2003.

International Association of Applied Demographers (officer)

Center for Spatially Integrated Social Science, UC Santa Barbara: Advisory Board, 2000-  
Research Advisory Board, Committee for Economic Development, 1988-1991.

Regents' Lecturer, UCLA, Spring 1987.

Social Science Research Council's Committee on Survey of Income & Program Participation, 1985-88.

National Advisory Child Health & Human Development Council, NIH, 1984-1987.

Population Research Committee, National Institute of Child Health & Human Development, 1977-79.

Committee on Behavioral and Social Aspects of Energy Consumption and Production, National Academy of Sciences, 1980-1982.

Committee on Urbanization and Population Redistribution, International Union for Scientific Study of Population, Chairman, 1976-1979.

Advisory Subcommittee for Applied Social and Behavioral Sciences, NSF, 1978-1981.

Future of Rural America Advisory Committee, FHA, 1978-1981.

Editorial Advisory Committee, *Urban Studies*, 1985-1995.

Editorial Advisory Board, *Journal of the Australian Population Assoc.*, 1995-1998.

#### RECENT MEDIA APPEARANCES/COVERAGE:

*Interviews:* CNBC; New York Times; Los Angeles Times; USA Today; Time Magazine; Seattle Times; AMA/Marketing News

*Commentary:* New York Times; Wall Street Journal; Washington Post; International Herald Tribune; Pittsburgh Post-Gazette; Los Angeles Times; Atlanta Constitution; Houston Chronicle; San Jose Mercury News; Providence Journal; San Antonio Express-News

*Articles:* "United Nations of Nantucket," *N Magazine* (Winter 2016).  
(access at: [www.n-magazine.com/united-nations-nantucket/](http://www.n-magazine.com/united-nations-nantucket/) )

#### RECENT PRESENTATIONS:

May 11, 2022: Presentation of recommended redistricting plan to City Council, Mount Vernon, WA  
Access at: <https://www.youtube.com/watch?v=wLJ3CvxbmMI> (starts: 36:35 - ends: 58:45)

February 2, 2022: Population Association of America, Applied Demography Conference (virtual):  
"Redistricting 101: A Tutorial for Beginners," with Thomas M. Bryan & William A. V. Clark  
Access at: <https://www.youtube.com/watch?v=D22le1URCi4>

February 2-4, 2021: Population Association of America, Applied Demography Conference (virtual):  
"New Technical Challenges in Post-2020 Redistricting," with T. M. Bryan  
"Tutorial on Local Redistricting," with T. M. Bryan  
"Learning to Live With COVID19: Anticipating Local Outbreaks," with D. A. Swanson 10/24/2019:

2019: Moderator, "Border Walls: Exclusionary and Ineffective," 2019 AAAS annual meetings, DC.  
Access at: <https://aaas.confex.com/aaas/2019/meetingapp.cgi/Session/21451>

2019: "Demographic Constraints on Minority Voting Strength in Local Redistricting Contexts," presented at 2019 Southern Demographic Association meetings, New Orleans (coauthored with Thomas Bryan). *Terrie Award for Meeting's Best Research Presentation.*

10/24/2019: "Prisoner Populations and Redistricting: Counting vs. Discounting," presented at 2019 Southern Demographic Association meetings, New Orleans (coauthored with Thomas Bryan).

- 01/24/2019: **“Big Data for a Small Island,”** lunch hour talk at Nantucket Saltmarsh Center  
<https://www.youtube.com/watch?v=ZqqJ9STcMwE>
- 10/13/2016: **“A Demographic Accounting Model for Class Action Litigation,”** presented at 2016 Southern Demographic Association meetings, Athens, GA (coauthored with Thomas Bryan).
- 10/22/2015: At Nantucket Historical Association’s “Food for Thought” series:  
**“Immigration on Nantucket: What You Should Know”**  
<https://www.youtube.com/watch?v=u17rINVweZs> (Morrison presentation starts at minute 2:10)
- 2015: City of Waterbury, CT presentations **“Alderman by District Reapportionment Commission”**  
<https://www.waterburyct.org/content/33396/33400/33431/default.aspx>
- 01/08/2014 meeting: <https://www.youtube.com/watch?v=aj6qE3JECg0&feature=youtu.be>  
 (Morrison presentation start at minute 23:10)
- 01/14/2015 meeting: [https://www.youtube.com/watch?v=98Vp4y11\\_sc](https://www.youtube.com/watch?v=98Vp4y11_sc)  
 (Morrison presentation starts at minute 9:10)
- 2014: **“Investing in Nantucket’s Future”** <http://vp.telvue.com/preview?id=T02542&video=223735>  
 (Morrison presentation starts at minute 1:30)
- 2013: **“Growing Old: How Aging Populations Will Transform Our Lives and Times”**  
[http://www.youtube.com/watch?v=kJvS\\_hhgLDk&feature=c4-overview-vl&list=PLjgJVmnztYsTqYVn\\_ijBhCGxA5-7DMtGw](http://www.youtube.com/watch?v=kJvS_hhgLDk&feature=c4-overview-vl&list=PLjgJVmnztYsTqYVn_ijBhCGxA5-7DMtGw) (Morrison presentation starts at minute 1:05)



**TOP CITED PUBLICATION (GOOGLE SCHOLAR)**

Peter A. Morrison - Google Scholar Citations

5/18/20, 10:24 PM

**Peter A. Morrison**

RAND; Morrison &amp; Associates

Demography

Redistricting

	All	Since 2015
Citations	3258	529
h-index	30	11
i10-index	61	12

TITLE	CITED BY	YEAR
<b>Return and other sequences of migration in the United States</b> JS DaVanzo, PA Morrison Demography 18 (1), 85-101	272	1981
<b>Chronic movers and the future redistribution of population: a longitudinal analysis</b> PA Morrison Demography 8 (2), 171-184	196	1971
<b>Duration of residence and prospective migration: the evaluation of a stochastic model</b> PA Morrison Demography 4 (2), 553-561	172	1967
<b>Rural renaissance in America? The revival of population growth in remote areas.</b> PA Morrison, JP Wheeler Population Reference Bureau, Inc., 1337 Connecticut Avenue, NW, Washington ...	164	1976
<b>The Los Angeles riots: Lessons for the urban future</b> M Baldassare, DO Sears, EW Butler, PA Morrison Routledge	161	2019
<b>Teenagers willing to consider single parenthood: Who is at greatest risk?</b> AF Abrahamse, PA Morrison, LJ Waite Family Planning Perspectives, 13-18	156	1988
<b>A new method for estimating race/ethnicity and associated disparities where administrative records lack self-reported race/ethnicity</b> MN Elliott, A Fremont, PA Morrison, P Pantoja, N Lurie Health services research 43 (5p1), 1722-1736	131	2008
<b>Using the Census Bureau's surname list to improve estimates of race/ethnicity and associated disparities</b> MN Elliott, PA Morrison, A Fremont, DF McCaffrey, P Pantoja, N Lurie Health Services and Outcomes Research Methodology 9 (2), 69	118	2009
<b>The changing demographic and economic structure of nonmetropolitan areas in the United States</b> KF McCarthy, PA Morrison	98	1977

## BOOKS

Morrison, P. A. and T. M. Bryan, *Redistricting: A Manual for Analysts, Practitioners, and Citizens* (Springer, 2019).  
Preview at: <https://www.amazon.com/Redistricting-Manual-Analysts-Practitioners-Citizens/dp/3030158268>

Morrison, P. A., ed. *A Taste of the Country: A Collection of Calvin Beale's Writings* (Penn State Univ. Press, 1990).  
Preview at: <https://www.amazon.com/Taste-Country-Collection-Writings-Studies/dp/0271006315>

Morrison, P. A., co-ed. *Demographics: A Casebook for Business and Government* (Westview Press, 1994). Access at:  
[https://www.rand.org/pubs/monograph\\_reports/MR904.html](https://www.rand.org/pubs/monograph_reports/MR904.html)

Morrison, P. A., ed. *Population Movements: Their Forms and Functions in Urbanization and Development* (IUSSP, Ordina Editions, Liege, Belgium, 1983).

Morrison, P. A. *Demographic Information for Cities: A Manual for Estimating and Projecting Local Population Characteristics* (Santa Monica, CA: RAND Corporation, R-618, 1971).  
Access at: <https://www.rand.org/pubs/reports/R0618.html>

## SELECTED PUBLICATIONS/PAPERS/POLICY BRIEFS/OP-EDS/ ORAL HISTORIES

Three of my Nantucket oral histories are accessible as podcasts at:  
<https://podcatr.com/narrative/documentaries/history/american-history/all-ears-nantucket/>  
Select: "From Chalatango"; "Mrs. Whyte"; and "Two New Yorks: Episode 1"

Most of my publications (or abstracts) are accessible at these sites:

[https://www.researchgate.net/profile/Peter\\_Morrison2/publications?sorting=newest&page=2](https://www.researchgate.net/profile/Peter_Morrison2/publications?sorting=newest&page=2)  
[www.rand.org/pubs/authors/m/morrison\\_peter\\_a.html](http://www.rand.org/pubs/authors/m/morrison_peter_a.html)

"Chap. 6. An Early-Warning Covid-19 Alert and Response Protocol for Seasonal Resort Communities,"  
David Swanson and Peter Morrison; and "Chap.16. America's Post-Pandemic Future," (coauthor). Forthcoming in: D. Swanson & R. Verdugo, eds., *Socio-Demographic Perspectives on the COVID-19 Pandemic* (Information Age Publishing, 2023).

"America's Post-Pandemic Future: A Demographic Perspective," in *PAA Affairs*, 2022 (coauthor).  
Access at: <https://www.populationassociation.org/blogs/david-swanson/2022/01/04/americas-post-pandemic-future-a-demographic-perspe>

"The contribution of first-name information to the accuracy of racial-and-ethnic imputations varies by sex and race-and-ethnicity among Medicare beneficiaries," (coauthor). *Medical Care* 60(8):556-562, August 2022.  
Access at: [www.lww-medicalcare.com](http://www.lww-medicalcare.com)

"America's Post-Pandemic Future: A Demographic Perspective," *PAA Affairs* (coauthor), 2022.  
Access at: <https://www.populationassociation.org/browse/blogs?CommunityKey=a7bf5d77-d09b-4907-9e17-468af4bdf4a6>

"Sanctuary Cities Get a Census Bonus," op-ed in *The Wall Street Journal*, July 16, 2019.  
[https://www.wsj.com/articles/sanctuary-cities-get-a-census-bonus-11563318817?fbclid=IwAR3Ygf2TAeqLjsUc\\_hbu3GS1775Zd9iGG3dIgWeMF1DQPv95jsTFBPtdHOY](https://www.wsj.com/articles/sanctuary-cities-get-a-census-bonus-11563318817?fbclid=IwAR3Ygf2TAeqLjsUc_hbu3GS1775Zd9iGG3dIgWeMF1DQPv95jsTFBPtdHOY)

"Small-Area and Business Demography" (coauthor) Chapter 31 in Dudley L. Poston, Jr. (editor). *Handbook of Population*. 2<sup>nd</sup> edition. Cham, Switzerland: Springer Nature.

"A border wall won't stop people from coming here illegally," op-ed in *The Bryan-College Station (TX) Eagle*, March 19, 2019 (co-author). Access at:  
[https://www.theeagle.com/opinion/columnists/a-border-wall-won-t-stop-people-from-coming-here/article\\_5b5e7216-4551-582c-9e82-0f5adf37896d.html](https://www.theeagle.com/opinion/columnists/a-border-wall-won-t-stop-people-from-coming-here/article_5b5e7216-4551-582c-9e82-0f5adf37896d.html)

"Demographic Approaches to Unveiling a Partisan Gerrymander," presented at the 2019 Population and Public Policy Conference, Albuquerque, NM.

"Estimating Nantucket's Effective Population," *Population Research & Policy Review*, 2020 (coauthor). Access at: <https://link.springer.com/article/10.1007%2Fs11113-019-09565-8>

"Small-Area and Business Demography," chapter in D. Poston, ed., *Handbook of Population* (Springer, 2019), coauthored with Stan Smith & Thomas Bryan.  
Access at: [https://link.springer.com/chapter/10.1007/978-3-030-10910-3\\_32](https://link.springer.com/chapter/10.1007/978-3-030-10910-3_32)

"Distinguishing 'False Positives' Among Majority-Minority Election Districts in Statewide Congressional Redistricting," 2017 Southern Demographic Association meetings (coauthor).

"A Comparison of Methods for Classifying and Modeling Respondents Who Endorse Multiple Racial/Ethnic Categories: A Healthcare Experience Application," (coauthor) *Medical Care* 57(6) 2019. Access at: <https://www.ncbi.nlm.nih.gov/pubmed/30439794>

"Can Puerto Ricans Spark a Latino Political Backlash?" op-ed in *San Antonio Express-News*, February 13, 2018 (coauthored with Charles S. Bullock, III).

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"Focus on Teaching: The Legend of the Calamity-Induced Baby Boom," PAA Affairs, Spring 2017.

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"The Demography of Trump's Wall," *N-IUSSP*, April 3, 2017 (coauthor).

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Russian translation: <https://demreview.hse.ru/article/download/8667/9249/>

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Access at: [www.mysanantonio.com/opinion/commentary/article/Three-myths-of-U-S-immigration-10975928.php](http://www.mysanantonio.com/opinion/commentary/article/Three-myths-of-U-S-immigration-10975928.php)

"From Legal Theory to Practical Application: A How-To for Performing Vote Dilution Analysis," *Social Science Quarterly* 99(2): 536-552 (2018), coauthor.

Access at: [https://www.researchgate.net/publication/315631377\\_From\\_Legal\\_Theory\\_to\\_Practical\\_Application\\_A\\_How-To\\_for\\_Performing\\_Vote\\_Dilution\\_Analyses\\_From\\_Legal\\_Theory\\_to\\_Practical\\_Application](https://www.researchgate.net/publication/315631377_From_Legal_Theory_to_Practical_Application_A_How-To_for_Performing_Vote_Dilution_Analyses_From_Legal_Theory_to_Practical_Application)

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## APPENDIX C

### TESTS OF STATISTICAL SIGNIFICANCE

My conclusions and opinions in this Report rely upon two separate tests of statistical significance, each of which confirms the existence of this apparent reversal in political participation after 2002.<sup>12</sup>

The first test is the K-means cluster analysis test of voter registration rates shown in Table 2 of my Report. This test rules out the null hypothesis here with strict scientific certainty ( $p < 0.001$ ). Accordingly, I conclude with scientific certainty that the 1980-2002 voter registration rates correspond to one cluster and the 2004-2022 voter registration rates correspond to a different cluster. The K-means cluster analysis has the distinctive strength of focusing on the possibility that the time series is no more than a succession of annual voter registration rates with no underlying racial dimension of change over time. For voter registration, an underlying pattern surely exists. Technical details of the K-means cluster analysis are documented in Appendix Figure 1.

Turning next to the voter turnout rates in Table 2 of my Report, I have conducted a difference of proportions test pertaining to statistical significance. For initial clarification, Figure 1 in my report highlights the dominant four-year cyclical pattern associated with the regular cycle of presidential and nonpresidential elections held every four years. This cyclical pattern is apparent in the pronounced saw-tooth visualization of the dominant voter turnout pattern in Figure 1 over the entire 42-year period from 1980 to 2022.

At the bottom of Figure 1, we see (in orange) a visualization of just the *racial difference* in each biennial election (apart from the dominant cyclical component). For example, the “-11.4%” shown at the lower left corner of Fig. 1 represents the difference in the 1980 election between the 59.5% of Blacks who turned out that year and the 70.9% of Whites who turned out. This orange visualization shows “*valleys*” on the left, which denote 10 successive election years when Black voter turnout trailed White voter turnout (1980-2002); and “*hills*” on the right, which denote 9 successive years when Black voter turnout exceeded White voter turnout (2004-2020). The question I pose here is whether the sequence of numerical differences shown at the bottom of Figure 1 ( -11.4%, -5.6%, -3.9% . . . +1.5%, +8.1%, +3.1%) document a genuine reversal in the underlying pattern.

Here I rely upon a difference of proportions test (the Fisher’s Exact Test). This test rules out the null hypothesis with strict scientific certainty ( $p < 0.001$ ). Accordingly, I conclude with scientific certainty that this apparent reversal of the racial difference in turnout (from Black turnout trailing that of Whites from 1980-2002 to the reverse thereafter) surely is real. Technical details of the Fisher’s Exact Test are documented in Appendix Figure 2.

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<sup>12</sup> These tests were conducted at my direction by two colleagues, Prof. David Swanson and Dr. Jeff Tayman. As an applied demographer, it is common practice to collaborate with other demographers and statisticians who can advise me on the use, application, and performance of statistical significance tests.

**APPENDIX FIGURE 1: TECHNICAL DETAILS FOR K-MEANS CLUSTER ANALYSIS****K-Means Cluster Analysis Report**

Dataset                      Untitled

**Minimum Iteration Section**

<b>Iteration No.</b>	<b>No. of Clusters</b>	<b>Percent of Variation</b>	<b>Bar Chart of Percent</b>
1	2	24.58	

**Iteration Section**

<b>Iteration No.</b>	<b>No. of Clusters</b>	<b>Percent of Variation</b>	<b>Bar Chart of Percent</b>
1	2	24.58	
2	2	24.58	
3	2	24.58	

**Cluster Means**

<b>Variables</b>	<b>Cluster1</b>	<b>Cluster2</b>
C3	0.4368	0.6644
Count	10	10

**Cluster Standard Deviations**

<b>Variables</b>	<b>Cluster1</b>	<b>Cluster2</b>
C3	0.05485091	0.07981395
Count	10	10

**F-Ratio Section**

<b>Variables</b>	<b>DF1</b>	<b>DF2</b>	<b>Between Mean Square</b>	<b>Within Mean Square</b>	<b>F-Ratio</b>	<b>Prob Level</b>
C3	1	18	0.2590088	0.004689444	55.23	0.000001



**APPENDIX FIGURE 2: TECHNICAL DETAILS FOR FISHER'S EXACT TEST**

Fisher's Exact test. Over the 42 years from 1980 to 2022, the voting patterns of White and Blacks are not stable. They have reversed from a higher percentage of White than Black voters turning out between 1980 and 2002 to a higher percentage of Black than White voters turning out since 2002. A difference of proportions test (Fisher's Exact test) indicates with more than 99% certainty that this shift is not due to chance.

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)	Point Probability
Pearson Chi-Square	16.364 <sup>a</sup>	1	.000	.000	.000	
Continuity Correction <sup>b</sup>	12.929	1	.000			
Likelihood Ratio	21.024	1	.000	.000	.000	
Fisher's Exact Test				.000	.000	
Linear-by-Linear Association	15.545 <sup>c</sup>	1	.000	.000	.000	.000
N of Valid Cases	20					

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 4.50.

b. Computed only for a 2x2 table

c. The standardized statistic is -3.943.